

**CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF INVESTMENT POLICY
FOR
SELF-FUNDED HEALTHCARE**

August 11, 2006 September 11, 2006

This Policy is effective immediately upon adoption and supersedes all previous self-funded healthcare policies.

I. PURPOSE

This document sets forth the investment policy ("the Policy") for the Self-Funded Healthcare Fund ("the Fund"). The design of this Policy ensures that investors, managers, consultants, or other participants selected by the California Public Employees' Retirement System ("the System") take prudent and careful action while managing the Fund. Additionally, use of this Policy provides assurance that there is sufficient flexibility in controlling investment risks and returns associated with this segment of investments.

II. STRATEGIC OBJECTIVE

A. Achieving the highest total rate of return, consistent with the liquidity and capital preservation requirements is the strategic objective of the Fund. Currently, the System funds four health plans from Self-Funded Health Care:

1. CalPERS Care (Basic);
2. CalPERS Care (Supplemental);
3. CalPERS Choice (Basic); and
4. CalPERS Choice (Supplemental).

~~The System shall manage the Fund's investments to exceed the return of the State Treasurer's Surplus Money Investment Fund (SMIF) by thirty basis points while maintaining a high level of diversification.~~

B. The Fund shall be managed to accomplish the following:

~~Provide capital preservation;~~

1. Provide sufficient liquidity to meet all cash needs; and
2. Enhance the Fund's total return.

III. RESPONSIBILITIES AND DELEGATIONS

- A. The **System's Investment Committee** ("the Investment Committee") is responsible for approving and amending the Policy. The Investment Committee delegates the responsibility for administering the Self-funded Health Care Fund to the Investment Staff through the Delegation of Authority (Delegation Nos. 89-13 and 95-50).
- B. The **System's Investment Staff's** ("the Staff") duties include, but are not limited to, the following:
1. Developing and recommending the Policy to the CalPERS Investment Committee.
 2. Developing and updating a procedures manual outlining the Staff operational procedures used in implementing this Policy.
 3. Implementing and adhering to the Policy.
 4. Auditing the securities trading activities of Fixed Income portfolio managers and traders by the Senior Investment Officer, Fixed Income;
 - 4.5. Reporting all violations in accordance with the violation reporting Policy.
 6. Hiring external money managers upon approval or direction of the Investment Committee;
 - 5.7. Purchasing only securities outlined in the Policy.
 - 6.8. Reporting to the Investment Committee at least quarterly on relative performance on the portfolio characteristics on the following issues:
 - 7.a. Relative duration;
 - 8.b. Sector weights; and
 - c. An exceptions report that covers Policy violations.
 9. Reporting internally to senior management concerning the implementation of this Policy. This report shall be prepared monthly to include, but is not limited to, the following areas:
 - a. Current market value and allocations by sector compared to the Index;

b. Aggregate and individual portfolio characteristics (including duration) compared to guidelines;

c. An exceptions report that covers Policy violations.

10. Recommending action with respect to the external manager(s) retained to implement the Program, in accordance with the Policy or with respect to changes in the manager's contractual guidelines, or regarding any other aspect the Staff considers pertinent; and

11. Reporting to the Investment Committee on the performance of the Program as needed and monitoring implementation of, and compliance with, the Policy.

C. The **External Manager(s)** ("manager(s)") are responsible for all aspects of portfolio management as set forth in their respective contracts with the System and shall fulfill the following duties:

1. Communicate with the Staff as needed regarding investment strategy and investment results. The manager(s) are expected to monitor, analyze, and evaluate performance relative to the agreed upon benchmark; and

2. Cooperate fully with the Staff, the System's custodian and the General Pension Consultant concerning requests for information.

DG. The **Consultant** is responsible for monitoring, evaluating, and reporting to the Investment Committee, at least quarterly, about the internally and externally managed fixed income the performance relative to the benchmark and Policy guidelines.

IV. PERFORMANCE OBJECTIVE

Exceed the return of the Lehman Brothers Aggregate Index (LAI)

V. IV. INVESTMENT APPROACHES AND PARAMETERS

A. **Philosophy and Approach**

The investment approach is to identify opportunities across bond market sectors and invest where risks are both understood and manageable while providing sufficient liquidity and preservation of capital complying with specifications in this Policy. ~~The portfolio may target a slightly longer duration than the benchmark, as well as allocate a greater percentage of assets to mortgage-backed and asset-backed securities than the SMIF. Corporate, sovereign, and mortgage-backed securities may receive a greater allocation than the Lehman Aggregate Index (LAI) given the higher~~

return expectations. Studies indicate that optimal sector allocations in fixed income favor corporate and mortgage-backed securities over U.S. Treasury and Agencies. These studies, along with the Self Funded Health Care low liquidity requirements serve as the foundation for a strategy that sacrifices the quality and liquidity of U.S. Treasuries for higher returning corporate, mortgage, and sovereign securities. Low liquidity requirements are derived from a study by the self-funded health care staff which looked at historical core fund size and determined a core level which requires low amounts of liquidity.

~~Mortgage-backed and asset-backed securities have higher risk-adjusted return expectations than securities such as U.S. Treasuries, Agencies or cash equivalents. However, a certain portion of the portfolio shall be invested in U.S. Treasuries, Agencies or cash equivalents to meet any unforeseen liquidity needs. The portfolio may target a slightly longer duration than the SMIF, given that studies of empirical evidence over the past 25 years have shown that duration extensions up to one year increase expected returns at the front end of the yield curve.~~

B. Specific Parameters

The System shall manage the following major categories of fixed income risk:

1. **Interest rate risk** is the price volatility produced by changes in the overall level of interest rates as measured by an option-adjusted duration. The duration shall be maintained at ~~less than or equal to three years, +/- 20% of the LAI on an option adjusted basis. Decisions shall be managed in a controlled manner using real returns, economic analysis, and Federal Reserve analysis.~~
2. **Yield curve risk** refers to price changes ~~triggered-induced~~ by the changing slope of the yield curve. Yield curve risk shall be managed in a controlled, disciplined fashion by ~~employing break-even and economic analyses monitoring and adjusting key rate and principal component durations.~~
3. **Convexity risk** is the downside risk of an equal move up or down in interest rates causing a greater price loss than price gain. Convexity shall be managed ~~using by monitoring~~ [option adjusted convexity](#) and ~~using~~ [scenario analyses](#).
4. **Sector risk** is the risk of holding sectors that are in different proportions than the ~~SMIF LAI~~. Based on the economic outlook, [historical factors](#), and break-even analysis, Staff shall estimate the impact on various sector spreads and returns and make allocations accordingly.

a. **Permissible Ranges of Sectors**

Each sector has a range by which actual allocations can fluctuate.

TOTAL FIXED INCOME PORTFOLIO WEIGHTINGS

Sector	Permissible Range <u>AI</u> as of 7/06	<u>Sector</u> <u>Ranges</u>
U.S. Treasury & Government Sponsored	<u>40-100%</u>	<u>0-80%</u>
Corporates	<u>190-75</u>	<u>10-50</u>
Mortgages <u>Securitized</u>	— <u>410-75</u>	<u>0-70</u>
Asset-Backed Securities	0-50	
<u>Opportunistic</u>	<u>0</u>	<u>0-20</u>

5. **Credit risk** is the uncertainty surrounding the borrower's ability to repay its obligations. ~~The management of credit risk shall be actively managed occur through rigorous credit analysis and issue diversification.~~ A downgrade of a security which creates a violation in the guidelines shall require an immediate sale unless the Senior Principal Investment Officer of Fixed Income determines that an immediate the sale potentially reduces the total return to the System. The following is the minimum credit quality for each of the sectors.

a. **Treasury & Government Sponsored**

The minimum weighted-average credit quality shall be AAA rated.

b. **Corporates**

The minimum credit quality of corporate issuers is investment grade (at least Baa3 or P2 by Moody's or BBB- or A2 by Standard and Poor's). This sector includes domestic and U.S. dollar denominated and hedged into U.S. dollar non-dollar fixed income public utilities, transportation, industrials, and bank and finance companies. The review of all corporate issues shall occur at least annually by the internal research staff. Where the investment in corporate bonds is driven by a favorable macro-view of the corporate sector versus another

sector like U.S. Treasuries and the implementation is done through a portfolio primarily managed through extensive issue diversification and industry constraints to minimize event and idiosyncratic risk, the annual review of issuers shall not apply. Non-rated bonds shall receive an investment grade rating (BBB- or better) from the internal research staff. The internal research staff shall review all securities at least annually.

c. **Securitized Mortgages**

The minimum average-weighted credit quality of mortgages is of the portfolio will be AA rated.

d. **Asset Backed Securities**

~~The minimum credit quality of asset-backed securities is A rated.~~

e. **Sovereign**

~~The minimum credit quality of the sovereign bonds is investment grade. All securities shall be dollar denominated.~~

f. **Cash Equivalents**

~~The minimum credit quality of cash equivalents is A2/P2.~~

6. **Structure risk** arises from the options implicit in bonds (like callable and optional sinking fund bonds) or cash flows that differ from expectations. Managing structure risk shall take place using option adjusted and scenario analyses as well as using [prepayment variability](#) stress testing.
7. **Reinvestment risk** is the uncertain future yield opportunities to invest funds that become available due to call, maturity, or coupon payments. Reinvestment risk shall be managed through [call risk](#) and cash flow analysis.
8. **Liquidity risk** is the ease with which an issue or specified amount can be sold at or near prevailing market prices. This is a primary consideration in managing the portfolio and shall be pursued in a prudent manner. Based on the analysis conducted by the Self Funded Health Care Staff, few liquidity constraints exist.

9. Currency Risk is the price volatility emanating from the value of the U.S. dollar relative to other currencies of the world. To eliminate this risk, all securities shall be denominated or hedged in U.S. dollars.

C. Restrictions and Prohibitions

1. Investments in a single corporate issuer shall not exceed 52% of the ~~total fixed income portfolio over the holding period for such investment.~~ For AAA rated asset-backed and mortgage-backed securities, each separate trust (pool of assets) is defined as a separate issuer and shall not exceed 2010% of the total fixed income portfolio. For High Quality LIBOR, Short Duration, and State Street STIF, no single issuer limit exists;
2. ~~The portfolio shall only contain~~Non-investment grade securities shall not exceed a maximum of 10% of the total fixed income portfolio;
3. ~~The Option adjusted durations of the total fixed income portfolio must be within +- 20% of the option adjusted LAI duration; maximum maturity of a security shall be five years, or if it is an amortizing security, the maximum weighted-average life shall be five years using conservative prepayment assumptions.~~
4. All sectors must be within the permissible ranges specified in Part IV. B. 4. a. of this Policy;
5. ~~Purchases~~CBO/CLO equity shall not exceed a maximum of 5% of the total fixed income portfolio; and ~~of non-dollar denominated securities are prohibited.~~
6. ~~Derivatives (futures and options), and the use of leverage Tobacco company investments~~ are prohibited.

D. Permissible Securities

1. Treasury and Government ~~Agencies~~Sponsored Securities (including derivative securities whose deliverable instrument is a U.S. Treasury or government obligation);
2. Publicly Traded Investment Grade Corporate Bonds;
3. Privately Placed Investment Grade Corporate Bonds;
- ~~4.~~ 3. Publicly Traded Mortgage-Backed Securities, including CMOs/REMICs whose deliverable instrument or underlying collateral is a U.S. mortgage-backed security;

5. U.S. Privately Placed Investment Grade Mortgage-Backed Securities including single-family residences, commercial loans, and other privately placed mortgage-backed securities;
6. 4. Investment Grade Asset Backed Securities;
7. Investment Grade Eurobonds;
8. 5. Investment Grade [Yankee bonds](#);
6. Cash Equivalents
9. Investment Grade Municipal Bonds;
10. Investment Grade Non-Dollar Fixed Income hedged into U.S. dollars that are consistent with the Foreign Debt Policy (Attachment A); and;
11. Opportunistic Securities (see Section X).

VVI. BENCHMARK

The benchmark shall be the ~~State Treasurer's SMIF plus thirty basis points.~~ Lehman Brother's Aggregate Index.

VIVII. GENERAL

Investors, managers, consultants, or other participants selected by the System shall make all calculations and computations shall be on a market value basis.

VIIIVIII. DERIVATIVES AND LEVERAGE POLICY

A. Financial Futures, Swaps, and Options

All transactions involving derivatives and leverage are governed by the California Public Employees' Retirement System Statement of Investment Policy for Derivatives – Investment Office. In addition to the restrictions defined in the Derivatives Policy, the following conditions apply:

1. Short selling of securities is prohibited, except in financial futures (as outlined in Part IX. A. 4. of this Policy);
2. Leverage is prohibited except futures position where there is an associated cash position (which together creates a synthetic bond);
3. The Staff may buy or sell the following fixed income related derivatives: swaps, financial futures, options on financial futures, options on volatility, options on underlying securities, and options on

securities indexes, which includes over-the-counter options (as specified in Part VI. D. 1. of this Policy); and

4. Acceptable strategies include bona fide hedges (to help achieve the target durations) and strategies that exploit the market's erroneous estimation of the volatility of interest rates. Other acceptable strategies include taking advantage of inaccurately priced instruments or using a more efficient method of implementing the investment objectives of the Portfolio.

B. Collateralized Mortgage Obligations (CMO)

1. Philosophy

CMOs are considered an important strategic tool for fixed income management. They segregate mortgage cash flows into instruments with different risk/return characteristics than the underlying mortgage pools. These instruments shall be purchased when valuations indicate a superior return versus other securities in the fixed income universe. Selected instruments shall generally exhibit positive convexity and superior call protection versus conventional mortgages. They shall only be purchased after performing the appropriate scenario, break-even, option adjusted, and cash flow analyses.

2. Purpose

Use of CMOs shall enhance return opportunities and manage risk at appropriate valuation levels while exercising prudence.

C. Restrictions and Prohibitions

1. Uncovered call writing is prohibited.
2. Premiums on purchased options on futures may not exceed 1% of the beginning market value of the total fixed income portfolio in any calendar year.
3. Speculation or arbitrage between two derivatives is prohibited. If a derivative is more attractively priced than the underlying security, the transaction is considered a substitution.
4. A maximum of 3% of the total fixed income portfolio may be invested in mortgage securities that are leveraged (e.g., inverse floaters).

D. Counterparty Exposure for Options, Swaps and Futures

1. The greater of \$500 million or 25 percent of the total notional derivative exposure can be maintained with any one counterparty for non-exchanged-traded derivatives (e.g., swaps, caps, floors, and options).
2. Transactions shall be executed with only domestic or non-U.S. brokers registered in the U.S. or the U.K. who have a short-term debt rating by at least two of the following three rating agencies:

A1 (Standard & Poor's) and P1 (Moody's), or F1 (Fitch Ratings), or rated on a long-term basis A3 (Moody's) A- (Standard & Poor's), or A- (Fitch Ratings Services). The Internal Research Staff shall actively review these brokers.

IX. OPPORTUNISTIC INVESTMENTS

A. Securities or sub-asset classes, which are candidates for inclusion, shall have risk, return, and correlation profile sufficiently different from other sectors such that its inclusion or exclusion can affect the risk and return expectations of the Portfolio. The criteria for inclusion into this classification shall include, but are not limited to:

1. Sufficient size, liquidity, and cost efficiency to allow a meaningful amount to be invested and have an impact on the total return.
2. Availability of sufficient internal or external investment and technical expertise to insure prudent implementation of an investment in that sub-asset class.
3. Presence of diversification, return enhancement, or some other readily identifiable attribute which is sufficiently different from other asset classes and which enhances the Fund's ability to achieve the strategic objectives outlined in this Policy.
4. Acceptance by other large money managers or financial institutions as a viable and meaningful sub-asset class or in the absence of such acceptance, academic basis or foundation for its inclusion.
5. Availability of sufficient data and/or history or expertise to assess the viability or benefit of the asset class to the Fund and to have an investment outcome that is measurable from such an asset class. Further, the asset class must have a basis for developing expected investment return, risk, and correlations for purposes of the financial study.

B. A sub-asset class may be approved for investment provided that it meets the criteria above and that the Senior Investment Officer, Fixed Income has

reviewed educational literature and/or other sources to fulfill fiduciary responsibility and has received approval by the Chief Investment Officer.

C. Permitted Opportunistic Investments

1. Domestic and Hedged Non-Dollar High Yield, including corporate zero and PIK securities;

2. Leveraged and Un-leveraged Bank Loans;

3. Asset Based Loans;

4. Non-investment grade CBO/CLO securities;

5. Convertible Bonds;

6. CMO residuals;

7. Dollar Denominated and Hedged Non-Dollar Sovereign Debt of countries that meet the requirements of Foreign Debt Policy (Attachment A); and

8. Other sub-asset classes may be added if they fit Part X, A and B.

X.VII. GLOSSARY OF TERMS

Definitions of key words used in this policy are located in The the Miscellaneous Investment Policies Glossary of Terms which is included is referenced in the System's Master Glossary of Terms.

Approved by the Policy Subcommittee:	September 17, 1999
Adopted by the Investment Committee:	November 15, 1999
Revised by the Policy Subcommittee:	December 10, 2004
Adopted by the Investment Committee:	February 14, 2005
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<u>Adopted by the Investment Committee:</u>	<u>September 11, 2006</u>

Asset Class Glossary: Miscellaneous
Policy: Self-Funded Healthcare
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Asset-Backed Security

A security collateralized by assets such as automobile loans, agricultural equipment loans, and credit card loans. The loans are securitized by the issuer and usually placed with a trustee.

Basis Point

~~One one-hundredth of one percent of yield (one basis point = .0001). It is the smallest measure used in quoting yields on bonds and notes.~~

Break-Even Analysis

Uses results from the scenario analysis. Since all projections should be viewed as risky, evaluating the sensitivity of the projected return to adverse market movements is critical. The break-even analysis calculates the movement required to reduce the sector or portfolio returns to a specified level at some horizon. This analysis creates a form of risk/return ratio. The higher the break-even value, the more the cushion against an adverse movement in rates.

Call Risk Analysis

Examines the portfolio's callable securities and estimates the amount of principal returned for a given drop in interest rates.

Cash Equivalents

Includes money market instruments, obligations of the U.S. government and its agencies, commercial paper, bank time deposits, certificates of deposit, banker's acceptances, repurchase agreements, and money market funds as defined under SEC Regulation 270.2a-7.

Convexity

The price change from a move in interest rate that cannot be explained by duration only. Positive convexity (when price rises more than expected and falls less) comes at a cost (lower yield). Negative convexity (price rises less than expected and falls more) usually comes with higher yield.

Credit Rating

A current opinion of an obligor's overall financial capacity (its creditworthiness) to pay its financial obligations. This opinion focuses on the obligor's capacity and willingness to meet its financial commitments as they come due. In the case of split ratings, the higher rating of either Moody's, Standard & Poor's, or Fitch Investor Services shall apply.

Derivative

An instrument whose value is based on the performance of an underlying financial asset, index, or other investment. Classes of derivatives include futures contracts, options, currency forward contracts, swaps, and options on futures.

Duration

A measure of price sensitivity to interest rate changes. Duration is the anticipated percentage move in price given a 100 basis point (1 percent) move in interest rates.

Economic Analysis

Examines reference points for indications on what to look for and what events are considered significant in the economy to understand relationships among complex and often seemingly unrelated events. This analysis is used in making decisions concerning duration and sector weightings.

Historical Factors

A review of past relationships and the environment associated with them to assess the relative investment potential of the current market conditions and relationships.

Investment Grade

A minimum credit rating of Baa3 by Moody's Investor Service or BBB- for Standard & Poor's Corporation, and BBB- by Fitch. Investment grade ratings apply to issuers whose financial risk is relatively low and the probability of future payment relatively high.

Lehman Brothers U.S. Aggregate Index

This index covers the available market for dollar denominated fixed income securities. It includes all bonds with a remaining maturity of one year or longer with amounts of at least \$250 million outstanding. This includes investment grade corporate, investment grade sovereign, U.S. governments, and mortgage securities. The duration or interest rate sensitivity of this index versus the Lehman Brothers Long Liability Index is significantly less.

Leverage

A condition where a portfolio's market obligation may exceed the market-value-adjusted capital commitment by the amount of borrowed capital (debt).

Mortgage Backed Security (MBS)

A general term used to describe securities backed by mortgages. MBSs are broken down into four types of securities: mortgage pass-through, mortgage-backed bond, collateralized mortgage obligation (CMO), and stripped mortgage-backed bonds. Mortgage pass-throughs are pooled loans, typically issued by the Government National Mortgage Association, Federal National Mortgage Association, and Federal Home Loan Mortgage Corporation. Mortgage-backed bonds have mortgage loans as collateral, but the term and interest payments are fixed. CMOs are defined above. Stripped mortgage-

backed securities have the principal and interest distribution altered from a pro rata distribution to an unequal distribution.

Option

Contracts that give the purchaser the right, but not the obligation, to buy or sell an underlying instrument at a certain price (the exercise or strike price) on or before an agreed date (the exercise period). For this right, the purchaser pays a premium to the seller. The seller (writer) of an option has a duty to buy or sell at the strike price, should the purchaser exercise his right.

Option Adjusted Analysis

A method that strips out embedded options in securities such as callable bonds and mortgage-backed securities, enabling comparisons with other security types within a consistent framework.

Prepayment Variability Analysis

A method that stress tests Collateralized Mortgage Obligations by varying prepayment assumptions to understand and anticipate how the structure changes in a constantly fluctuating interest rate environment.

Scenario Analysis

Projects returns over a number of changing situations (such as interest rates, curve twists, spreads, etc.) and weighs each situation to arrive at an average expected return. This process allows comparisons to varying types of securities and portfolios.

Sovereign

A security issued by a foreign government or government sponsored agency.

Yankee Bonds

Securities issued in the domestic market by foreign borrowers. Yankee bonds must be issued by companies domiciled in G11 countries, Australia, Ireland, or Scotland, and must be rated at least A3 (Moody's) and A- (Standard & Poor's).